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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,425	07/24/2003	Rebecca S. Wulliman	7110D	9842

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Intellectual Property (R21D)
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EXAMINER

MATZEK, MATTHEW D

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/626,425

Applicant(s)

WULLIMAN ET AL.

Examiner

Matthew D. Matzek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-94 is/are pending in the application.
- 4a) Of the above claim(s) 1-19, 41-72 and 81-94 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-40 and 73-80 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-19 and 67-72, drawn to a burn through and flame propagation resistant laminate, classified in class 442, subclass 1.
- II. Claims 20-40 and 73-80, drawn to a burn through and flame propagation resistant insulation system, classified in class 162, subclass 145.
- III. Claims 41-44, 81-84 and 93-94, drawn to a burn through and flame propagation resistant insulation system in the fuselage of an aircraft, classified in class 162, subclass 145.
- IV. Claims 45-65 and 85-92, drawn to an enveloped burn through and flame propagation resistant insulation system, classified in class 162, subclass 145.

The inventions are distinct, each from the other because of the following reasons:

1. Invention I and inventions II, III and IV are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a burn through and flame propagation laminate that may be used as a blanket or in clothing and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit

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evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. Invention II and inventions III and IV are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as an insulation system for use in buildings or cars and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

3. Inventions III and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions group III is directed to burn through and flame propagation resistant insulation system in the fuselage of an aircraft and group IV is directed to an enveloped burn through and flame propagation resistant insulation system. Group III does not recite the use of an enveloped system.

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4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Robert D. Touslee on 4/7/2005 a provisional election was made without traverse to prosecute the invention of Group II, claims 20-40 and 73-80. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-19, 41-72 and 81-94 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 20, 21, 23, and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Forsten et al. (US Patent 6,312,561).

9. Forsten et al. disclose a sheet composition with certain proportions of meta-aramids used as a flame barrier composition (Abstract). The flame barrier composition of the applied invention is a combination of meta-aramid fibrils, floc, mica, and polymeric binder and forms a flexible sheet or paper (col. 1, lines 53-65). The applied patent teaches that it would be advantageous to apply a moisture blocking material layer to the surface of the barrier composition such as a fluoropolymer. The moisture blocking material layer may be in the form of a coating (col. 2, lines 48-57). Figure 2 shows the flame barrier composition layer **24** adjacently overlaying sound and thermal insulative material **26** such as glass wool, aramid batting, and the like (col. 2, line 64 – col. 3, line 3). The Examiner takes the position that the glass wool is the same as glass fiber. The entire composition, flame barrier composition sheet, insulative material and fluoropolymer, may be placed in a bag of protective polymeric film. The bagging film may be made of any film forming polymeric material including polyester, polyvinyl fluoride (PVF), and polyimide. The flexible barrier sheet/paper may be adhered to the bagging film to provide increased tear resistance (col. 2, line 58 – col. 1, line 5).

10. The flame barrier composition is to comprise between 40 and 75 weight percent mica (col. 2, lines 30-35).

Claim Rejections - 35 USC § 102/103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 25-27, 73-74 and 79 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Forsten et al.
12. Forsten et al. is silent as to the water vapor permeability of the polymeric film, but as the applied invention meets the chemical and compositional limitations set forth in the applied invention it is reasonable to presume that the invention of Forsten et al. possesses the instantly claimed vapor permeability.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

13. Claims 28, 29, 31 and 33 are rejected under 35 U.S.C. 103(a) as obvious over Forsten et al.
14. Claims 28 and 31 are rejected as the Examiner takes the position that the fluoropolymer layer is located on the outer surface of the barrier composition sheet between said sheet and the bagging film. The applied patent provides for adhesion between the sheet and the bagging film therefore, in this particular embodiment the fluoropolymer layer would be adhered to the bagging film. It would have been obvious to one of ordinary skill in the art to have used a heat sealable adhesive to adhere fluoropolymer layer to the bagging film. The skilled artisan would have been motivated by the desire provide the barrier composition sheet with improved puncture and tear resistance and a means of adherence that would not to impart permeability, i.e. stitching.
15. Claims 29 and 33 are rejected as it would have been obvious to one of ordinary skill in the art to have coated the second major surface of the barrier composition sheet with a heat

sealable adhesive. The skilled artisan would have been motivated by the desire to hold the sound and thermal insulative material in place.

16. The applied patent is silent as to the basis weight of the PVF bagging film. Claim 75 is rejected as it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have made the bagging film with the instantly claimed basis weights, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

17. Claims 35-40 and 78 are rejected as it would have been obvious to one of ordinary skill in the art to coated the second major surface of the laminated sheet with a film of PVF. The skilled artisan would have been motivated by the teaching of Forsten et al. of providing additional puncture, structural and water protection for the laminated sheet by surrounding it with a protective polymeric film.

18. Claim 22 and 80 are rejected under 35 U.S.C. 103(a) as obvious over Forsten et al. in view of Hill et al. (US Patent 4,874,648). The invention of Forsten et al. has been previously disclosed but is silent as to the use of polyimide foam for use as a lightweight, flexible, thermal and acoustical insulation material.

19. Hill et al. disclose a method of making high efficiency, flame resistant polyimide foam insulation (Abstract). One of ordinary skill in the art would have found it obvious to have used the polyimide foam insulation as the lightweight, flexible, thermal and acoustical insulation in the invention of Forsten et al. The skilled artisan would have been motivated by polyimide

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foam's excellent insulative and flame resistant properties. Polyimide foams also do not emit toxic gases when exposed to direct flames (col. 1, lines 23-29).

20. Claims 30, 32, 34, 76 and 77 are rejected under 35 U.S.C. 103(a) as obvious over Forsten et al. in view of Eddy (US Patent 5,788,184). The invention of Forsten et al. has been previously disclosed but is silent as to the use of reinforcing scrim as a means of increasing the puncture and tear resistance of the laminated sheet.

21. Eddy discloses a flexible aircraft fuselage insulation blanket (Abstract). Figure 3d displays an outer polymeric film **52**, thermal and acoustical insulation material **56**, and reinforcing scrim **54**. The most preferred textile reinforcement is an interlaced yarn structure comprising a continuous multifilament yarn woven scrim fabric and a non-interlaced yarn reinforced in-situ structure (col. 16, lines 34-38).

22. It would have been obvious to one of ordinary skill in the art to have included a reinforcing scrim in the laminated sheet to increase the puncture and tear resistance of the laminated sheet. The skilled artisan would have been motivated by the desire to increase the puncture and tear resistance of the laminated sheet. Forsten et al. teaches the desire for increased puncture and tear resistance of the laminated sheet (col. 2, lines 65-67).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is (571) 272-2423. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRINCIPAL EXAMINER